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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,482	01/21/2004	Shoji Katsuragawa	H9876.0077/P077	9805
24998	7590	11/27/2006	EXAMINER HUFFMAN, BRIAN GEORGE	
DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			ART UNIT 3709	
			PAPER NUMBER	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,482

Applicant(s)

KATSURAGAWA ET AL.

Examiner

Brian G. Huffman

Art Unit

3709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/22/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

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DETAILED ACTION

Comments

1. The Preliminary Amendment filed on 02/16/2006 has been entered.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because of the inclusion of legal phraseology:

Re lines 7, 8 and 9: "means."

4. The abstract of the disclosure is objected to because it is not narrative. It has been drafted in the form of a claim in one run-on sentence, which is improper. The abstract should be narrative and consist of a series of complete sentences forming a single paragraph.

Correction is required. See MPEP § 608.01(b)

Claim Objections

5. Claims 3, 7, 8, 13 and 16 objected to because of the following informalities:

Re claim 3: -- a -- should be inserted after "executing" in lines 1 and 2.

Re claim 7: "planes" in line 4 should be -- plane --.

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Re claim 8: -- the -- should be inserted after "inputted from" in line 2.

Re claim 13: "between" in line 3 should be -- between --.

Re claim 16: "oerable" in line 3 should be -- operable --.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-2 and 7-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to computer programs, which are merely functional descriptive material when not claimed in combination with an appropriate computer readable medium. The claims do not define any structural and functional interrelationships between the computer program and the other claimed elements of a computer to allow the computer program's functionality to be realized, and as such are non-statutory. See 35 USC 101 Interim Guidelines, pages 50-54.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 7-17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Re claim 7, line 5: the limitation "the control means" lacks sufficient antecedent basis because there is no prior mention of control means in the claim. "the" should be deleted.

Re claim 7, lines 14-15: the limitation "the projection targets" lacks sufficient antecedent basis because there is no prior mention of projection targets in the claim.

Re claim 8: the limitation "operating means" in line 4 lacks sufficient antecedent basis because there is no prior mention of operating means in the claim or the claim from which it depends.

Claims 9-11 and 13-17 are dependent on claim 7.

Re claim 10: the limitation "deformation of the projection image pasted to the object is remarkable" in lines 5-6 renders the claim indefinite as it is unclear as to what is meant by remarkable deformation. The claim should be reworded to quantify a measurable amount of deformation or to clarify what applicant regards as remarkable.

Re claim 12: the limitation "the control means" in line 5 lacks sufficient antecedent basis because there is no prior mention of control means in the claim. "the" should be deleted.

Re claims 13-14: the limitation "deformation of the projection image pasted to the object is remarkable" in lines 4-5 renders the claim indefinite as it is unclear as to what is meant by remarkable deformation. The claim should be reworded to quantify a measurable amount of deformation or to clarify what applicant regards as remarkable.

Appropriate correction is required.

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Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-8, 11-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukizaki et al. (US 6,856,321 B2) in view of Takata (US 6,816,164 B2).

Re claims 1-6: Tsukizaki discloses a program, a game machine (10), and a storage medium having thereon stored a program for projecting a predetermined image onto a character of a game in a game machine including operation means (180) for executing predetermined operation in a screen, calculation processing means (100) for executing predetermined calculation, and control means (120) connected with the operation means and the calculation processing means and for controlling the calculation processing means, the program/game machine/storage medium being operable to effect: a step for arranging, based on an input signal from the operation means, an image (520) and a virtual light source (L) for projecting the image onto a character (500), at arbitrary positions in the vicinity of the character in a three-dimensional virtual space, and for pasting on the character a projected image created by projecting the image onto the character from the projection light source, and wherein the character is constituted by a combination of a plurality of parts, and wherein the program is operable to allow the control means to designate at least one of the parts as a projection target of the image in response to the operation of the operation means and to paste the projected image to the designated part (Fig. 1 and 6A-8; Col. 2, lines 26-33, 47-50 and 56-60; Col. 3, lines 65-4; Col. 4, lines 18-37 and 51-67; Col. 5, lines 11-18 and 27-60; Col. 6, lines 3-17). With respect to applicant's "step for arranging based on an input signal from the operation means", the prior art is considered to be capable of performing this step as Tsukizaki's invention provides a controller (180) which an operator of the

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system uses to instruct the operation of the entertainment apparatus (10). With respect to applicant's character being "constituted by a combination of a plurality of parts," it is well known in the art to use a number of smaller polygons to make up an object or character to provide a more realistic representation of the object or character, and is considered to be an obvious feature of Tsukizaki's invention.

However, Tsukizaki fails to disclose an image creation step for creating an image consisting of two-dimensional coordinates with the control means by operating the operation means.

Takata teaches an apparatus and method for creating an image/texture consisting of two-dimensional coordinates based on the input of an operator of the system (Fig. 4-8B; Col. 5, lines 44-53; Col. 6, 66-14; Col. 7, lines 30-49 and 58-67; Col. 8, lines 1-13, 20-33 and 38-49).

Re claims 7-8, 11 and 15: Tsukizaki discloses an image display control program for operating a computer (10) as image data creation means for creating image data for displaying on a display device (15) an object image created by projecting a predetermined projection image onto an object consisting of three-dimensional coordinates in a three-dimensional virtual space, the image display control program being operable to allow the control means (120) to effect functions of: arranging the object (500) and the projection image (520) in the virtual space; determining, based on operation of an operator, the relative position of the projection image to the object and the position of a virtual light source (L) which projects the projection image onto the object; calculating the distance between the virtual light source and a projection plane (510) containing the projection position on the object, and calculating the projection plane of the object, onto which the projection image is projected, removing from the projection targets the projection planes at a predetermined distance or farther from the virtual light source; projecting the projection image onto the projection plane with the virtual light source as a viewpoint, and pasting the projection image to the projection plane of the object; and creating object image data for the object to which the projection image is pasted; and wherein the object consists of a combination of a plurality of parts, and wherein the program is operable to allow the control means to effect a

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function of designating at least one of the parts as a projection target of the projection image in response to operation of an operator, and pasting the projection image to the designated part(s) (Fig. 1 and 6A-8; Col. 2, lines 26-33, 47-50 and 56-60; Col. 3, lines 65-4; Col. 4, lines 18-37 and 51-67; Col. 5, lines 11-18 and 27-60; Col. 6, lines 3-17). With respect to applicant's "calculating the distance between the virtual light source and a projection plane," the prior art teaches the use of a rectangular parallelepiped object (540) to virtually connect the projection image with the projection object. While Tsukizaki is silent to calculating this distance, it is considered an obvious step of the prior art as the invention must necessarily calculate this distance in order to form the rectangular parallelepiped object connecting the projection image and the projection object. With respect to applicant's character being "constituted by a combination of a plurality of parts," it is well known in the art to use a number of smaller polygons to make up an object or character as discussed above. Further, with respect to applicant's "designating at least one of the parts as a projection target of the projection image in response to operation of an operator," the faces of the object (500) of the prior art can be taken to be a "plurality of parts" and Tsukizaki teaches pasting the projection image (520) on to a multiple parts of the object (as depicted in Fig. 7A-7E). The prior art is also considered to be capable of performing actions "in response to operation of an operator" as discussed above.

However, Tsukizaki fails to disclose a step of creating predetermined projection image data to be projected onto the object and that the program is operable to allow the control means to effect a function of creating image data of the projection image based on an operation signal inputted from operating means by a user.

Takata teaches an apparatus and method for creating an image/texture consisting of two-dimensional coordinates based on the input of an operator of the system as discussed above.

Re claim 12: Tsukizaki further teaches calculating for each pixel respectively the distance between the virtual light source and a projection plane containing the projection position on the object, projecting with the virtual light source as a viewpoint the pixels of the projection image

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onto the pixels on the projection plane closest to the viewpoint, and pasting the projection image onto the projection plane of the object. With respect to applicant's "calculating for each pixel respectively the distance between the virtual light source and a projection plane containing the projection position on the object...projecting...the pixels of the projection image onto the pixels on the projection plane," the prior art discloses calculating (as discussed above) these distances and projecting on a 1-pixel wide line in either the X- or Y-direction and that the program is capable of designating to allow or prohibit the writing to each pixel in the frame. As such, by repeating the calculation and projection processes in the other orthogonal direction (i.e. if X-direction first, then repeat in Y-direction), it can be seen that the calculation and projection would be computed on a pixel-by-pixel basis (Col. 4, lines 39-46; Col. 5, lines 20-35).

Tsukizaki and Takata are considered to be analogous art because both inventions related to the same field of endeavor of 3D image generation in video game machines.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the image generation program, game machine and storage medium of Tsukizaki with the image creation step of Takata to allow the game player to select custom textures or images to distinguish one player's game characters from an opponent's characters (Takata, Col. 2, lines 29-36). Thus it would have been obvious to combine Tsukizaki with Takata to obtain the invention as specified in claims 1-8, 11-12 and 15.

12. Claims 9-10, 13-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukizaki in view of Takata, and further in view of Tanaka et al. (US 6,256,040 B1). The teachings of Tsukizaki and Takata have been discussed above.

Re claim 9: However, Tsukizaki as modified by Takata fails to disclose a program that is operable to allow the control means to effect functions of: projecting the projection image into a transparent object having a same or an approximately same shape as that of the object and

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pasting the projection image to the transparent object; and causing the display device to display the transparent object to which the projection image is pasted in such a manner as to be superimposed on the object.

Tanaka teaches pasting an image (the hatching as depicted in Fig. 2a) onto a covering object (42) which is displayed as to be superimposed on the object (40) (Fig. 2A; Col. 7; lines 19-24). While Tanaka is silent to the covering object being transparent, it is well known in the art to use transparent polygons or objects and to paste an image or texture to their surface to make up a game object, and as such is considered to be an obvious feature of Tanaka's invention.

Re claims 10, 13-14 and 16-17: However, Tsukizaki as modified by Takata fails to disclose a program that is operable to effect a function of changing the transparency degree of the projection object when it is determined from the relation between the positions of the virtual light source, the projection object and the object that deformation of projection image pasted to the object is remarkable.

Tanaka teaches a game machine wherein the transparency of a projection object can be changed (Fig. 12B; Col. 13, lines 21-30).

Tsukizaki as modified by Takata and Tanaka are considered to be analogous art because the inventions all relate to the same field of endeavor of 3D image generation in video game machines.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the image generation program, game machine and storage medium of Tsukizaki as modified by Takata with the superimposing and transparency changing methods of Tanaka in order to provide the game player with an outstanding visual effect and to encourage the player to continue playing the game (Tanaka, Col. 1, lines 50-55). Thus it would have been obvious to combine Tsukizaki as modified by Takata with Tanaka to obtain the invention as specified in claims 9-10, 13-14 and 16-17.

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Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Akazawa et al. (US 6,924,815 B2) discloses an image generating system and image generation method for the same. LeMay et al. (US 6,887,157 B2) discloses virtual cameras and 3-d gaming environments in a gaming machine. Kitao (US 6,831,656 B2) discloses a game system and computer readable medium storing game program. Suzuki (US 6,738,061 B2) discloses a method, apparatus, storage medium, program and program product for generating image data of virtual three-dimensional space. Miida et al. (US 2003/0112233 A1) discloses an image display control method, apparatus thereof, recording media on which the image display control is recorded, and game device. Matsubara et al. (JP 2003067767 A) discloses a character edition program for video game storage medium thereof and video game device.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian G. Huffman whose telephone number is (571) 270-1348. The examiner can normally be reached on 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BGH


KIM NGUYEN
PRIMARY EXAMINER